THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for June 8, 2006

Minutes approved February 8, 2007

Members in Attendance:

Kathleen Baskin	Designee, Executive Office of Environmental Affairs
Marilyn Contreas	Designee, Department of Housing and Community Development
Jonathan Yeo	Designee, Department of Conservation and Recreation
Mary Griffin	Designee, Department of Environmental Protection
Mark Tisa	Designee, Department of Fish and Game
Joseph E. Pelczarski	Designee, Massachusetts Office of Coastal Zone Management
Thomas Cambareri	Public Member
John LeBeaux	Public Member
Bob Zimmerman	Public Member

Others in Attendance:

Mike Gildesgame	DCR
Michele Drury	DCR
Bruce Hansen	DCR
Linda Hutchins	DCR
Sara Cohen	DCR
Anne Monnelly	DCR
Gardner Bent	USGS
Paul Lauenstein	WSCAC/Neponset River Watershed Association
Peter Weiskel	USGS
Margaret Kearns	DFG, Riverways
Martha Stevenson	LWVM & WSCAC
Roger Frymire	Citizen, Cambridge, MA
James Marshall	Town of Plainville Water/Sewer Dept.
Philip Guerin	Worcester DPW & Parks/Mass. Water Works Assn.
Ryan Ferrara	MWRA Advisory Board
Ralph Abele	EPA
Pam Heidell	MWRA
John Clarkeson	EOEA
Vandana Rao	EOEA
Margaret Callanan	EOEA
Duane LeVangie	DEP
Becky Saggese	DCR
Isabel Toukontonis	CDM
Martin Pillsbury	MAPC
Nicole Belk	National Weather Service
Richard Bradley	Irrigation Association of NE
Klayne Palmer	DAR
Marilyn McCrory	CZM
Frank Hartig	DCR

Agenda Item #1: Executive Director's Report

Hansen provided an update on the hydrologic conditions:

- May precipitation was above normal to excessive. The regions of Massachusetts received between 152 percent (Western Region) and 408 percent (Northeast Region) of normal precipitation during May. The statewide average precipitation for May 2006 is estimated as 8.66 inches, about 230 percent of normal. A record-making storm impacted Massachusetts from May 12 to16.
- Fire conditions: early June rainfall has reduced fire danger.
- May streamflows were above normal or excessive in most of Massachusetts. Record rainfall from the "Mothers Day" storm noted above resulted in record and near-record flows and flooding in the northeastern part of the state. New peak discharge was recorded at the two gaging stations on the Ipswich River.
- May groundwater levels were above normal and normal.
- Reservoir levels are at or near capacity, which represents above-normal conditions for this time of year.
- The outlook is for more excessive precipitation. A rainfall event on June 7 to 8 focused on southeast Massachusetts. Four rivers are at or above flood stage.

Open Forum:

Tisa inquired about the status of updates to the surface water quality standards and requested that DEP make a presentation to the WRC. Griffin and Baskin noted that the public comment period on the standards closed on March 31, and that DEP was currently processing the many comments received. Baskin confirmed that the WRC would vote on the standards.

Agenda Item #2: Vote on Plainville's Local Water Resources Management Plan and Lake Mirimichi Water-Level Plan

Drury provided background on the project. The Water Resources Commission approved an interbasin transfer in March 2004 with two conditions: that the town complete a local water resources management plan and a plan for monitoring water levels in Lake Mirimichi. The monitoring plan indicates when water levels reach thresholds at which withdrawals must cease or be reduced. The town submitted both plans, and WRC staff has determined that the plans meet the requirements of the WRC and the Interbasin Transfer Act. The town needs WRC approval before it can put its wells on line.

Gildesgame asked for more information on plans for integrated water supply and wastewater disposal. James Marshall, representing Plainville, replied that the town hopes to create a small sewer district on a privately owned vacant lot in the Taunton River Basin. This district would have a small package sewage treatment plant with disposal through groundwater discharge. This plan would return 550,000 gallons per day to the basin.

Hutchins then summarized the lake monitoring plan, which includes details on the types, locations, and capacities of wells. The monitoring plan meets the WRC conditions attached to the interbasin transfer approval. In addition, DEP has reviewed the plan and included it in the town's Water Management Act permit. Therefore, WRC staff recommends that the commission approve the monitoring plan.

Commissioners asked several questions. Following some discussion of rates and timing of drawdown, average and maximum daily flows, and volumes of wastewater flows, Baskin requested motions and votes on two items.

VOTE	A motion was made by Zimmerman with a second by Contreas to approve the town of Plainville's Lake Mirimichi Water Level Monitoring Plan, completed in compliance with the WRC's March 2004 Interbasin Transfer Act Decision for the Lake Mirimichi Wellfield. The vote to approve was unanimous of those present.

VOTE	A motion was made by Zimmerman with a second by Lebeaux to approve the town of Plainville's Local Water Resources Management Plan, completed in compliance with the WRC's March 2004 Interbasin Transfer Act Decision for the Lake Mirimichi Wellfield. The vote to approve was unanimous of those present.

Agenda Item #3: Discussion of Long-range water supply in Massachusetts

Baskin introduced the discussion topic by saying that the Secretary of Environmental Affairs is seeking thoughts and guidance from the Water Resources Commission, which is the policy-setting commission for water resources in the Commonwealth, on sustainable water supply and sustainable water resources. The secretary seeks guidance from the commission in identifying the critical components needed to evaluate sustainable water supply and water resources. His concern is driven by several recent developments, including proposed expansion of the Massachusetts Water Resources Authority system, proposals for desalination plants, the issue of stressed basins, and recent studies by the Metropolitan Area Planning Council projecting water shortages in some communities. Baskin pointed out that this would be the beginning of a major policy discussion, and invited commissioners to offer their initial thoughts.

As an example of components of such an evaluation, Baskin pointed out that a new methodology is needed to evaluate stress in coastal basins, where tidal influences may affect streamflow. Because coastal areas, such as Cape Cod and southeastern Massachusetts, are growing rapidly, it is important to be able to assess stress in these coastal basins. Another issue is developing a methodology for identifying the flows that would be expected in a watershed under different seasonal conditions and determining the flows needed to sustain ecosystems.

Yeo commented that the 2004 Massachusetts Water Policy laid out most of the big issues, such as stressed basins, index streamflows, water conservation and others, and that teams of people are currently working on these issues. He added that, though it is a good idea to step back and make sure there are no gaps, staff should not be sidetracked from this ongoing work. Baskin clarified that the secretary does not want to put technical studies on hold. Rather, he would like to define what we need to know, what studies are currently being conducted that will provide some of those answers, and what additional studies need to be done. She added that this initiative is broader than the Water Policy.

Commissioners responded with a number of suggestions:

- Zimmerman suggested three questions that should be examined: (1) How should we change infrastructure so that we are more resilient to the effects of global climate change, including increased frequency of both flooding and droughts? (2) How can we meet both human demands for water and the restore habitat? and (3) What incentives can we create to make the needed infrastructure changes?
- Contreas observed that the state has a 20-year transportation plan but that the siting of transportation infrastructure is not necessarily coordinated with potential water supply areas.
- In response to a question from Cambareri about use of stressed basins and the MWWA white paper, Baskin noted that the Massachusetts Water Works Association had requested that a Blue Ribbon panel be convened to examine the Water Management Act Policy and its guidance. The task of the panel is fairly specific, whereas the initiative the secretary is proposing for the Water Resources Commission will look at a broader set of questions.
- Cambareri suggested that there are parallels between the stressed basins report and the draft drought management plan and that the issues of addressed by these two plans – instream flow and groundwater levels – should be integrated.
- Griffin suggested having speakers provide examples of good approaches to water management in localities and other states. Baskin added that the Metropolitan Area Planning Council may be invited to inform the commission on the effects of growth on water planning.
- Pelczarski suggested that the commission explore changes in technology that could potentially affect water management. These might include advances in reuse and treatment technologies.
- LeBeaux suggested a review of policies like the Chapter 40B affordable housing statute that allows development without consideration of availability of water supply.
- Zimmerman suggested the commission look at basic assumptions about the way we use water, such as assumptions based on 100 years of engineering practice, and assumptions that at some point we will run out of water. He suggested that human use can be just one other "bend in the river" if water is not piped from one basin to another.

Baskin thanked commissioners for their thoughts and said the commission would return to this discussion.

Agenda Item #4: Discussion of Water Conservation Standards for the Commonwealth

Baskin noted that the comment period on the Water Conservation Standards closed May 19, 2006, and that comments had been received and addressed. Where there were conflicts among comments, that particular item was left as a placeholder. She distributed copies of Appendices, which are intended to provide technical guidance for users of the standards. Baskin said that the goal was to discuss the major edits to the document at this meeting and to bring the final document to the commission for a vote at the next WRC meeting.

Commissioners then discussed the specific changes suggested. Much of the discussion focused on whether an item should be included as a standard or a recommendation. Baskin reminded commissioners that standards are activities that water users are expected to accomplish, while

recommendations are activities that the state would like water users to accomplish. Commissioners agreed to make the following changes:

- Section 2, System Water Audits and Leak Detection: include as a recommendation that penalties or fines be in place for stealing water
- Section 2, Standard #3: agree on the language related to unaccounted-for water
- Section 3: include as a standard that water suppliers bill at least quarterly
- Section 5, Residential, Standard #2: agree on the language on residential per capita water use.
- Section 6, Public Sector: review to ensure that comments on municipal water conservation efforts have been addressed.
- Section 9, Lawn and Landscape: Agree on the language for Standard #1 and leave as a standard.
- Section 9: modify the language and include as a standard the reference to encouraging on-site recharge
- Include a statement that the document will be reviewed periodically, with an understanding that it will be revisited approximately every five years.

Guerin made a lengthy statement suggesting that the standards on residential per capita use and unaccounted-for water (UAW) be recommendations, not standards. He explained that water suppliers do not have reliable data on residential water use, population, and UAW. He also said that the water industry is developing new ways of estimating UAW.

Baskin thanked Guerin for his comments and invited him to submit copies of technical journal articles he had referenced to the commission. Several commissioners responded that the language "meet or demonstrate steady progress toward meeting…." for residential water use and UAW provided enough flexibility to accommodate the needs of different communities.

Baskin invited commissioners to review the response-to-comments document and noted that WRC staff had addressed the majority of comments received. She outlined the next steps in preparing the final Water Conservation Standards document for a vote by the commission at the July meeting. Some additional discussion of the proposed standards followed.

Agenda Item #5: Update on recent heavy rains in Eastern Massachusetts, tracking the flows and records

Hutchins introduced Nicole Belk, a service hydrologist from the National Weather Service (NWS) office in Taunton. Belk showed contour maps of rainfall from May 12 to 15, 2006, with totals as high as 13 to 14 inches in northeast Massachusetts. This was a very similar pattern to rain events in October 1996. In May 2006, heavy rain occurred into southern New Hampshire and Maine, which caused high flows in the Merrimack River. It was a historic long-duration rain event. The NWS estimates it was the fourth highest 96-hour rain event for Boston since 1872. She described the Rex blocking pattern and the Omega blocking pattern of high and low pressure areas over North America that can result in persistent rain events such as those in May and June 2006. She also discussed the 2005 and 2006 hurricane seasons. In 2005, the hurricane season was above normal for the Atlantic Ocean. For 2006, conditions are favorable for hurricane development with above-normal sea-surface temperatures, although they are lower than last year.

Gardner Bent of USGS gave a presentation on the floods in northeast Massachusetts in May 2006. During the flooding May 13 to 19, USGS field staff made 86 high-flow measurements at 55 gages in Massachusetts, including measurements at 11 recently installed gages. Use of the Acoustic Doppler Current Profiler (ADCP) allowed for four times as many measurements during that time as would have been possible without this instrument. It was beneficial to establish the high flow range of the stage-discharge relationship for the new gages. The Merrimack River gage in Lowell recorded the highest flow since 1938, and the third highest flow for its period of record, in May 2006. At its peak, the Merrimack River in Lowell was 7 feet above flood stage during May 2006. New record peak flows were recorded at two gages on the Ipswich River and on the Saugus River. Bent showed a summary of recurrence intervals for the high flows, in the range of 10 years to 150 years. With this week's rain, there are high flows in southeast Massachusetts, and USGS expected near-record high flows in the Jones, Indian Head, and Segregansett Rivers.

Meeting adjourned

Attachments distributed:

- Current Water Conditions in Massachusetts, June 8, 2006
- USGS News Release, May 17, 2006: Flooding in Massachusetts, May 2006
- Draft Water Conservation Standards
- Memo from Vandana Rao dated 8 June 2006, Draft Final Water Conservation Standards Response to Public Comments